5

ABSTRACT OF THE DISCLOSURE

A multi-layered packet processing device using multiple processors for processing a received multi-layered packet at a hardware level. The multi-layered packet processing device includes an interface for transmitting a data packet to a node and receiving the data packet from the node through a public network; and a plurality of packet processing portions for sequentially processing the data packet, in a pipeline pattern, according to a header of the data packet transferred through the interface.